

of manures, that I feel it due to the people of our State to preserve them from the mistakes and omissions found in that Report, by furnishing them the truth in this one.

The public now demands scientific truths that they may apply them to the practical purposes of life, and to meet this demand many and various books and articles on scientific subjects, as applicable to Agriculture, have been published of late; some of these good, many bad, most indifferent. The public demands information on these subjects, and with despotic imperiousness it must be obeyed. The Farmers and Planters of our State are so well educated and intelligent a class, that they only need to know the elementary truths that belong to their calling, and they themselves can work out and practice the practical details; those facts which require technical skill to elucidate they are not expected to know, but in all that pertains to mere application as to cultivation, they are the best teachers themselves; they need no instruction, from other sources.

There is, however, an intimate connection between all the arts and sciences, and no one art has ever flourished without scientific aid: most important is it then that the most ancient and universal art should receive the aid of the oldest and most useful science. One of the first records we have is that Adam was driven from Paradise and condemned to earn his bread by the sweat of his brow, to till the soil for a support—and almost the next record we have is that *Tubal Cain* was an expert in Chemistry, having the ability to separate metals from their ores, to combine them as alloys and to fashion them into various useful shapes; all these being the result of chemical operations.

Most interesting would it be to trace out all the connections between the arts and sciences, their mutual relations and nice dependencies. Nature does not map herself out into metes and bounds, and isolated compartments, as we classify her. We, in our weakness, do this, and mar her divine beauty by lines scrawled over her person to assist our weak minds in her comprehension. Our limited intellects cannot grasp her majestic grandeur and we have to study her by piece-meal.

The combined study of the air and what it contains, the earth and its constituents, have a direct decided bearing on agriculture, and the latter can neither be studied nor practiced to the greatest advantage without a knowledge of the former.

The Air or Atmosphere, besides containing substances having a direct influence on life by their constituent parts, has many mechanical and physical properties, aiding vegetation. It is the investing covering of the earth, one of the forces which keep things in a state of rest and give them form and support. Annihilate or even lessen it, and we would have one sea of vapor,